

Resource Report 3- Vegetation and Wildlife

Table 3.3.1-1

Marine Finfish Species Likely to Occur Within the Proposed Terminal Project Area or Along Proposed Vessel Routes

AES Sparrows Point Project

| Common Name          | Scientific Name                      | Commercially Important | Recreationally Important |
|----------------------|--------------------------------------|------------------------|--------------------------|
| MARINE               |                                      |                        |                          |
| Albacore tuna        | <i>Thunnus alalunga</i>              | x                      |                          |
| Almaco jack          | <i>Seriola rivoliana</i>             | x                      | x                        |
| Atlantic butterfish  | <i>Peprilus triacanthus</i>          | x                      |                          |
| Atlantic mackerel    | <i>Scomber scombrus</i>              | x                      | x                        |
| Atlantic menhaden    | <i>Brevoortia tyrannus</i>           | x                      | x                        |
| Atlantic sea herring | <i>Clupea harengus</i>               | x                      | x                        |
| Atlantic spadefish   | <i>Chaetodipterus faber</i>          | x                      | x                        |
| Banded rudderfish    | <i>Seriola zonata</i>                | x                      | x                        |
| Bank sea bass        | <i>Centropristis ocyurus</i>         | x                      | x                        |
| Bigeye tuna          | <i>Thunnus obesus</i>                | x                      | x                        |
| Black drum           | <i>Pogonias cromis</i>               | x                      | x                        |
| Black grouper        | <i>Mycteroperca bonaci</i>           | x                      | x                        |
| Black margate        | <i>Anisotremus surinamensis</i>      | x                      |                          |
| Black sea bass       | <i>Centropristis striata</i>         | x                      | x                        |
| Black snapper        | <i>Apsilus dentatus</i>              | x                      |                          |
| Blackfin snapper     | <i>Lutjanus buccanella</i>           | x                      |                          |
| Blue marlin          | <i>Makaira nigricans</i>             | x                      |                          |
| Bluefin tuna         | <i>Thunnus thynnus</i>               | x                      |                          |
| Bluefish             | <i>Pomatomus saltatrix</i>           | x                      | x                        |
| Blueline tilefish    | <i>Caulolatilus microps</i>          | x                      |                          |
| Bluestripe grunt     | <i>Haemulon sciurus</i>              | x                      |                          |
| Cero                 | <i>Scomberomorus regalis</i>         | x                      |                          |
| Cobia                | <i>Rachycentron canadum</i>          | x                      | x                        |
| Coney                | <i>Epinephelus fulvus</i>            | x                      |                          |
| Croaker              | <i>Micropogonias undulatus</i>       | x                      | x                        |
| Cubera snapper       | <i>Lutjanus cyanopterus</i>          | x                      | x                        |
| Dog snapper          | <i>Lutjanus jocu</i>                 | x                      |                          |
| Dolphinfish          | <i>Coryphaena hippurus</i>           | x                      | x                        |
| French grunt         | <i>Haemulon flavolineatum</i>        | x                      |                          |
| Gag grouper          | <i>Mycteroperca microlepis</i>       |                        | x                        |
| Golden tilefish      | <i>Lopholatilus chamaeleonticeps</i> |                        | x                        |
| Goliath grouper      | <i>Epinephelus itajara</i>           | x                      | x                        |
| Gray snapper         | <i>Lutjanus griseus</i>              | x                      | x                        |
| Gray triggerfish     | <i>Balistes capriscus</i>            | x                      | x                        |
| Graysby              | <i>Epinephelus cruentatus</i>        | x                      |                          |
| Greater amberjack    | <i>Seriola dumerili</i>              | x                      | x                        |
| Hogfish              | <i>Lachnolaimus maximus</i>          | x                      | x                        |
| Jolthead porgy       | <i>Calamus bajonado</i>              | x                      |                          |
| King mackerel        | <i>Scomberomorus cavalla</i>         | x                      | x                        |
| Knobbed porgy        | <i>Calamus nodosus</i>               | x                      |                          |
| Lane snapper         | <i>Lutjanus synagris</i>             | x                      | x                        |
| Lesser amberjack     | <i>Seriola fasciata</i>              | x                      |                          |

| <b>Common Name</b>    | <b>Scientific Name</b>              | <b>Commercially Important</b> | <b>Recreationally Important</b> |
|-----------------------|-------------------------------------|-------------------------------|---------------------------------|
| Little tunny          | <i>Euthynnus alletteratus</i>       | x                             | x                               |
| Mahogany snapper      | <i>Lutjanus mahogoni</i>            | x                             |                                 |
| Margate               | <i>Haemulon album</i>               | x                             |                                 |
| Misty grouper         | <i>Epinephelus mystacinus</i>       | x                             |                                 |
| Monkfish              | <i>Lophius americanus</i>           | x                             | x                               |
| Mutton snapper        | <i>Lutjanus analis</i>              | x                             | x                               |
| Nassau grouper        | <i>Epinephelus striatus</i>         | x                             |                                 |
| Ocean triggerfish     | <i>Canthidermis sufflamen</i>       | x                             |                                 |
| Queen snapper         | <i>Etelis oculatus</i>              | x                             |                                 |
| Queen triggerfish     | <i>Balistes vetula</i>              | x                             |                                 |
| Red drum              | <i>Scianops ocellatus</i>           | x                             | x                               |
| Red grouper           | <i>Epinephelus morio</i>            | x                             |                                 |
| Red hake              | <i>Urophycis chuss</i>              | x                             | x                               |
| Red hind              | <i>Epinephelus guttatus</i>         | x                             |                                 |
| Red porgy             | <i>Pagrus pagrus</i>                | x                             | x                               |
| Red snapper           | <i>Lutjanus campechanus</i>         | x                             | x                               |
| Rock hind             | <i>Epinephelus adscensionis</i>     | x                             |                                 |
| Rock sea bass         | <i>Centropristis philadelphica</i>  | x                             |                                 |
| Sailfish              | <i>Istiophorus platypterus</i>      | x                             | x                               |
| Saucereye porgy       | <i>Calamus calamus</i>              | x                             |                                 |
| Scamp                 | <i>Mycteroperca phenax</i>          | x                             |                                 |
| Schoolmaster          | <i>Lutjanus apodus</i>              | x                             |                                 |
| Scup                  | <i>Stenotomus chrysops</i>          | x                             | x                               |
| Sheepshead            | <i>Archosargus probatocephalus</i>  | x                             | x                               |
| Silk snapper          | <i>Lutjanus vivanus</i>             | x                             | x                               |
| Silver hake (whiting) | <i>Merluccius bilinearis</i>        | x                             | x                               |
| Skipjack tuna         | <i>Katsuwonus pelamis</i>           | x                             | x                               |
| Snowy grouper         | <i>Epinephelus niveatus</i>         | x                             | x                               |
| Spanish mackerel      | <i>Scomberomorus maculatus</i>      | x                             | x                               |
| Speckled hind         | <i>Epinephelus drummondhayi</i>     | x                             | x                               |
| Spot                  | <i>Leiostomus xanthurus</i>         | x                             | x                               |
| Spotted seatrout      | <i>Cynoscion nebulosus</i>          | x                             | x                               |
| Summer flounder       | <i>Paralichthys dentatus</i>        | x                             | x                               |
| Swordfish             | <i>Xiphias gladius</i>              | x                             |                                 |
| Tautog                | <i>Tautoga onitis</i>               | x                             | x                               |
| Tiger grouper         | <i>Mycteroperca tigris</i>          | x                             |                                 |
| Tomtate               | <i>Haemulon aurolineatum</i>        | x                             | x                               |
| Vermilion snapper     | <i>Rhomboplites aurorubens</i>      | x                             | x                               |
| Wahoo                 | <i>Acanthocybium solanderi</i>      | x                             |                                 |
| Warsaw grouper        | <i>Epinephelus nigritus</i>         | x                             | x                               |
| Weakfish              | <i>Cynoscion regalis</i>            | x                             | x                               |
| White grunt           | <i>Haemulon plumieri</i>            | x                             | x                               |
| White marlin          | <i>Tetrapturus albidus</i>          | x                             |                                 |
| Whiteboned porgy      | <i>Calamus leucosteus</i>           | x                             | x                               |
| Windowpane            | <i>Scophthalmus aquosus</i>         | x                             | x                               |
| Winter flounder       | <i>Pseudopleuronectes americana</i> | x                             | x                               |
| Witch flounder        | <i>Glyptocephalus cynoglossus</i>   | x                             |                                 |
| Wreckfish             | <i>Polyprion americanus</i>         | x                             |                                 |
| Yellowfin tuna        | <i>Thunnus albacares</i>            | x                             | x                               |
| Yellowmouth grouper   | <i>Mycteroperca interstitialis</i>  | x                             |                                 |

| Common Name              | Scientific Name                    | Commercially Important | Recreationally Important |
|--------------------------|------------------------------------|------------------------|--------------------------|
| Yellowtail flounder      | <i>Pleuronectes ferruginea</i>     | x                      |                          |
| Yellowtail snapper       | <i>Ocyrus chrysurus</i>            | x                      |                          |
| <b>Shark Species</b>     |                                    |                        |                          |
| Atlantic sharpnose sha   | <i>Rhizopriondon terraenovae</i>   | x                      |                          |
| Blue shark               | <i>Prionace galuca</i>             | x                      |                          |
| Dusky shark              | <i>Charcharinus obscurus</i>       | x                      |                          |
| Sandbar shark            | <i>Charcharinus plumbeus</i>       | x                      |                          |
| Sand tiger shark         | <i>Odontaspis taurus</i>           | x                      |                          |
| Scalloped hammerhea      | <i>Sphyrna lewini</i>              | x                      |                          |
| Shortfin mako shark      | <i>Isurus oxyrhyncus</i>           | x                      |                          |
| Spiny dogfish shark      | <i>Squatina dumerili</i>           | x                      |                          |
| Tiger shark              | <i>Galeocerdo cuvieri</i>          | x                      |                          |
| <b>Skate/Ray Species</b> |                                    |                        |                          |
| Atlantic stingray        | <i>Dasyatis sabina</i>             | x                      |                          |
| Clearnose skate          | <i>Raja eglantera</i>              |                        |                          |
| Little skate             | <i>Leucoraja erinacea</i>          | x                      |                          |
| Rosette skate            | <i>Leucoraja garmani virginica</i> |                        |                          |
| Roughtail stingray       | <i>Dasyatis centroura</i>          | x                      |                          |
| Winter skate             | <i>Leucoraja ocellata</i>          |                        |                          |

Table references:

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Resource Report 3- Vegetation and Wildlife

Table 3.3.1-2

Diadromous and Freshwater Finfish Species Likely to Occur Along the Proposed Pipeline Route and the Terminal Project Area

AES Sparrows Point Project

| Common Name            | Scientific Name                | Commercially Important | Recreationally Important | Warm/Cold Fisheries |
|------------------------|--------------------------------|------------------------|--------------------------|---------------------|
| DIADROMOUS/FRESHWATER  |                                |                        |                          |                     |
| Alewife                | <i>Alosa pseudoharengus</i>    | x                      | x                        | both                |
| American eel           | <i>Anguilla rostrata</i>       | x                      | x                        | both                |
| American shad          | <i>Alosa sapidissima</i>       | x                      | x                        | both                |
| Amur pike              | <i>Esox reicherti</i>          |                        |                          | cold                |
| Banded darter          | <i>Etheostoma zonale</i>       |                        | x                        | warm                |
| Banded killifish       | <i>Fundulus diaphanus</i>      |                        |                          | both                |
| Banded sunfish         | <i>Enneacanthus obesus</i>     |                        | x                        | warm                |
| Black crappie          | <i>Pomoxis nigromaculatus</i>  |                        | x                        | warm                |
| Blacknose dace         | <i>Rhinichthys atratulus</i>   |                        |                          | warm                |
| Blue tilapia           | <i>Oreochromis aureus</i>      | x                      | x                        | both                |
| Blueback herring       | <i>Alosa aestivalis</i>        | x                      |                          | both                |
| Bluegill               | <i>Lepomis macrochirus</i>     |                        | x                        | warm                |
| Bluespotted sunfish    | <i>Enneacanthus gloriosus</i>  |                        | x                        | warm                |
| Bluntnose minnow       | <i>Pimephales notatus</i>      |                        |                          | both                |
| Bowfin                 | <i>Amia calva</i>              |                        | x                        | warm                |
| Bridle shiner          | <i>Notropis bifrenatus</i>     |                        |                          | warm                |
| Brook stickleback      | <i>Culaea inconstans</i>       |                        |                          | cold                |
| Brook trout            | <i>Salvelinus fontinalis</i>   |                        | x                        | cold                |
| Brown bullhead         | <i>Ameiurus nebulosus</i>      | x                      | x                        | warm                |
| Brown trout            | <i>Salmo trutta</i>            |                        | x                        | cold                |
| Central stoneroller    | <i>Campostoma anomalum</i>     |                        |                          | both                |
| Chain pickerel         | <i>Esox niger</i>              |                        | x                        | both                |
| Channel catfish        | <i>Ictalurus punctatus</i>     | x                      | x                        | warm                |
| Comely shiner          | <i>Notropis amoenus</i>        |                        |                          | both                |
| Common carp            | <i>Cyprinus carpio</i>         | x                      | x                        | both                |
| Common shiner          | <i>Luxilus cornutus</i>        |                        |                          | both                |
| Creek chub             | <i>Semotilus atromaculatus</i> |                        |                          | warm                |
| Creek chubsucker       | <i>Erimyzon oblongus</i>       |                        | x                        | cold                |
| Cutlips minnow         | <i>Exoglossum maxillingua</i>  |                        |                          | warm                |
| Eastern mudminnow      | <i>Umbra pygmaea</i>           |                        |                          | both                |
| Eastern silvery minnow | <i>Hybognathus regius</i>      |                        |                          | both                |
| Fallfish               | <i>Semotilus corporalis</i>    |                        | x                        | cold                |
| Fantail darter         | <i>Etheostoma flabellare</i>   |                        |                          | both                |
| Fathead minnow         | <i>Pimephales promelas</i>     |                        | x                        | both                |
| Fourspine stickleback  | <i>Apeltes quadracus</i>       |                        |                          | both                |
| Gizzard shad           | <i>Dorosoma cepedianum</i>     | x                      |                          | both                |
| Golden rehorse         | <i>Moxostoma erythrurum</i>    |                        |                          | warm                |
| Golden shiner          | <i>Notemigonus crysoleucas</i> |                        |                          | both                |
| Goldfish               | <i>Carassius auratus</i>       |                        |                          | warm                |
| Grass carp             | <i>Ctenopharyngodon idella</i> |                        | x                        | warm                |
| Green sunfish          | <i>Lepomis cyanellus</i>       |                        | x                        | warm                |
| Hickory shad           | <i>Alosa mediocris</i>         | x                      |                          | both                |
| Hornyhead chub         | <i>Nocomis biguttatus</i>      |                        |                          | warm                |

| Common Name            | Scientific Name                   | Commercially Important | Recreationally Important | Warm/Cold Fisheries |
|------------------------|-----------------------------------|------------------------|--------------------------|---------------------|
| Largemouth bass        | <i>Micropterus salmoides</i>      |                        | x                        | warm                |
| Least brook lamprey    | <i>Lampetra aepyptera</i>         |                        |                          | cold                |
| Logperch               | <i>Percina caprodes</i>           |                        | x                        | warm                |
| Longear sunfish        | <i>Lepomis megalotis</i>          |                        | x                        | warm                |
| Longnose dace          | <i>Rhinichthys cataractae</i>     |                        |                          | cold                |
| Longnose gar           | <i>Lepisosteus osseus</i>         |                        | x                        | warm                |
| Margined madtom        | <i>Noturus insignis</i>           |                        | x                        | warm                |
| Mimic shiner           | <i>Notropis volucellus</i>        |                        |                          | both                |
| Mosquitofish           | <i>Gambusia holbrooki</i>         |                        |                          | both                |
| Mottled sculpin        | <i>Cottus bairdi</i>              |                        |                          | both                |
| Mummichog              | <i>Fundulus heteroclitus</i>      |                        |                          | both                |
| Muskellunge            | <i>Esox masquinongy</i>           |                        | x                        | cold                |
| Northern hogsucker     | <i>Hypentelium nigricans</i>      |                        | x                        | both                |
| Northern pike          | <i>Esox lucius</i>                |                        | x                        | cold                |
| Northern redbelly dace | <i>Phoxinus eos</i>               |                        |                          | both                |
| Pearl dace             | <i>Margariscus margartia</i>      |                        |                          | both                |
| Potomac sculpin        | <i>Cottus girardi</i>             |                        |                          | both                |
| Pumpkinseed            | <i>Lepomis gibbosus</i>           |                        | x                        | warm                |
| Quillback              | <i>Carpiodes cyprinus</i>         |                        | x                        | warm                |
| Rainbow smelt          | <i>Osmerus mordax</i>             |                        | x                        | cold                |
| Rainbow trout          | <i>Oncorhynchus mykiss</i>        |                        | x                        | cold                |
| Rainwater killifish    | <i>Lucania parva</i>              |                        |                          | both                |
| Redbreast sunfish      | <i>Lepomis auritus</i>            |                        | x                        | both                |
| Redear sunfish         | <i>Lepomis microlophus</i>        |                        | x                        | both                |
| Redfin pickerel        | <i>Esox americanus americanus</i> |                        |                          | cold                |
| Redside dace           | <i>Clinostomus elongatus</i>      |                        |                          | cold                |
| River chub             | <i>Nocomis micropogon</i>         |                        |                          | both                |
| Rock bass              | <i>Ambloplites rupestris</i>      |                        | x                        | both                |
| Rosyface shiner        | <i>Notropis rubellus</i>          |                        |                          | warm                |
| Rosy dace              | <i>Clinostomus funduloides</i>    |                        |                          | both                |
| Satinfin shiner        | <i>Cyprinella analostana</i>      |                        |                          | warm                |
| Sea lamprey            | <i>Petromyzon marinus</i>         |                        |                          | both                |
| Shield darter          | <i>Percina peltata</i>            |                        |                          | warm                |
| Shorthead redhorse     | <i>Moxostoma macrolepidotum</i>   |                        | x                        | both                |
| Silver redhorse        | <i>Moxostoma anisurum</i>         |                        |                          | both                |
| Silverjaw minnow       | <i>Notropis buccatus</i>          |                        |                          | both                |
| Slimy sculpin          | <i>Cottus cognatus</i>            |                        |                          | cold                |
| Smallmouth bass        | <i>Micropterus dolomieu</i>       |                        | x                        | both                |
| Spotfin shiner         | <i>Cyprinella spilopterus</i>     |                        |                          | both                |
| Spottail shiner        | <i>Notropis hudsonius</i>         |                        |                          | both                |
| Stonecat               | <i>Noturus flavus</i>             |                        |                          | warm                |
| Striped bass           | <i>Morone saxatilis</i>           | x                      | x                        | both                |
| Striped shiner         | <i>Luxilus chrysocephalus</i>     |                        |                          | both                |
| Swallowtail shiner     | <i>Notropis procne</i>            |                        |                          | warm                |
| Tadpole madtom         | <i>Noturus gyrinus</i>            |                        |                          | warm                |
| Tessellated darter     | <i>Etheostoma olmstedii</i>       |                        | x                        | warm                |
| Walleye                | <i>Stizostedion vitreum</i>       |                        | x                        | both                |
| Warmouth               | <i>Lepomis gulosus</i>            |                        | x                        | warm                |
| White bass             | <i>Morone chrysops</i>            |                        | x                        | cold                |
| White catfish          | <i>Ameiurus catus</i>             |                        | x                        | warm                |

| Common Name     | Scientific Name              | Commercially Important | Recreationally Important | Warm/Cold Fisheries |
|-----------------|------------------------------|------------------------|--------------------------|---------------------|
| White crappie   | <i>Pomoxis annularis</i>     |                        | x                        | warm                |
| White perch     | <i>Morone americanus</i>     | x                      | x                        | cold                |
| White sucker    | <i>Catostomus commersoni</i> |                        | x                        | both                |
| Yellow bullhead | <i>Ameiurus natalis</i>      |                        | x                        | warm                |
| Yellow perch    | <i>Perca flavescens</i>      | x                      | x                        | cold                |

Notes:

1. Cold water designations reflect preferred temperatures between 7 and 18 degrees C. Warm water designations reflect preferred temperatures between 18 and 29 degrees C (Osmond et al. 1995).

Table references:

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**Resource Report 3- Vegetation and Wildlife**

**Table 3.3.1-3**

**Benthic Taxa Recorded During MDDNR Over Five Year Survey (FY2001-FY2005) and AES Sampling Efforts Conducted In June and October 2006. AES Sparrows Point Project**

| <b>MDDNR Sampling Efforts</b>  | <b>AES Sampling Effort</b>     |
|--------------------------------|--------------------------------|
| <i>Ameroculodes sp.</i>        | <i>Actinaria sp.</i>           |
| <i>Apocorophium lacustre</i>   | <i>Corophium sp.</i>           |
| <i>Carinoma tremaphoros</i>    | <i>Cyathura polita</i>         |
| <i>Edotea triloba</i>          | <i>Eteone heteropoda</i>       |
| <i>Edwardsia elegans</i>       | <i>Heteromastus filiformes</i> |
| <i>Eteone heteropoda</i>       | <i>Leptocheirus plumulosus</i> |
| <i>Gammarus daiberi</i>        | <i>Leptochelia savignyi</i>    |
| <i>Geukensia demissa</i>       | <i>Macoma balthica</i>         |
| <i>Heteromastus filiformis</i> | <i>Monoculodes edwardsi</i>    |
| <i>Hobsonia florida</i>        | <i>Mulina lateralis</i>        |
| <i>Leitoscoloplos sp.</i>      | <i>Mya arenaria</i>            |
| <i>Leptocheirus plumulosus</i> | Nematoda                       |
| <i>Littoridinops tenuipes</i>  | <i>Nereis succinea</i>         |
| <i>Macoma baltica</i>          | Oligochaeta                    |
| <i>Marenzelleria viridis</i>   | Osteichthyes (juevenile)       |
| <i>Melita nitida</i>           | <i>Polydora sp.</i>            |
| <i>Micrura leidyi</i>          | <i>Rangia cuneata</i>          |
| <i>Mulinia lateralis</i>       | <i>Scolecopides viridis</i>    |
| <i>Mya arenaria</i>            | <i>Streblospio benedicti</i>   |
| <i>Mysidopsis bielowi</i>      | <i>Tellina agilis</i>          |
| <i>Mytilopsis leucophaeata</i> |                                |
| Nemertea                       |                                |
| <i>Neomysis Americana</i>      |                                |
| <i>Parahesionia luteola</i>    |                                |
| <i>Paranais frici</i>          |                                |
| <i>Paranais Litoralis</i>      |                                |
| <i>Paraprionospio pinnata</i>  |                                |
| <i>Rangia cuneata</i>          |                                |
| <i>Streblospio benedicti</i>   |                                |
| <i>Stylochus ellipticus</i>    |                                |
| Tubificidae                    |                                |
| Turbellaria                    |                                |
|                                |                                |
|                                |                                |
| 32 taxa                        | 20 taxa — 7 overlap            |

Notes:

1. MDDNR performed benthic survey at site location # 23 and #201 between 9/11/2001 and 5/10/2005 (Baywide Benthic Database 2006).
2. AES surveys were performed on June 28 and October 18, 2006.

Resource Report 3- Vegetation and Wildlife

Table 3.3.1-4

Waterbodies Crossed by the Sparrows Point Project  
AES Sparrows Point Project

| Stream Location Identification Number | County/State  | Milepost | Waterbody                                     | Waterbody Crossing Classification <sup>a</sup> | USGS Stream Type <sup>b</sup> | State Water Quality Classification (Fisheries) <sup>c</sup> | Crossing Method <sup>d</sup> | Width(ft) |
|---------------------------------------|---------------|----------|---|--|-------------------------------|---|------------------------------|-----------|
| USGS Stream (9.1 WT)                  | Baltimore/MD  | 0.75     | Humphrey Creek/Canal Water Treatment Facility | Intermediate                                   | P                             | I   | 4                            | TBD       |
| 104SA7                                | Baltimore/ MD | 6.86     | Bread and Cheese Creek                        | Intermediate                                   | P                             | IV-P  | 1                            | 18        |
| 104SA6                                | Baltimore/ MD | 7.03     | unnamed tributary to Bread and Cheese Creek   | minor  | P                             | IV-P  | 2A or 2B                     | 6         |
| 104SA4                                | Baltimore/ MD | 7.2      | unnamed tributary to Bread and Cheese Creek   | Minor  | I                             | IV-P  | 2A or 2B                     | 5         |
| 104SA3                                | Baltimore/ MD | 7.27     | unnamed tributary to Bread and Cheese Creek   | Minor  | I                             | IV-P  | 2A or 2B                     | 4         |
| 104SA2                                | Baltimore/ MD | 7.4      | unnamed tributary to Bread and Cheese Creek   | Minor  | P                             | IV-P  | 2A or 2B                     | 4         |
| 114.1SA1                              | Baltimore/ MD | 7.97     | Branch of Back River                          | Intermediate                                   | P                             | I   | 2A or 2B                     | 18        |
| 114.2SA1                              | Baltimore/ MD | 8.6      | unnamed tributary to Branch of Back River     | Minor  | I                             | I   | NA                           | 10        |
| USGS Stream                           | Baltimore/ MD | 8.71     | Back River                                    | Major  | P                             | I   | 4                            | TBD       |
| 138SA1                                | Baltimore/MD  | 9.77     | unnamed tributary to Northeast Creek          | Minor  | P                             | I   | 2A or 2B                     | 6         |
| 140SA2                                | Baltimore/MD  | 10.27    | unnamed tributary to Northeast Creek          | Minor  | P                             | I   | 2A or 2B                     | 10        |
| 144SA2                                | Baltimore/MD  | 10.42    | unnamed tributary to Northeast Creek          | Intermediate                                   | P                             | I   | 3                            | 18        |
| 158SB1                                | Baltimore/MD  | 11.17    | Stemmers Run                                  | Intermediate                                   | P                             | I   | 3                            | 15        |
| 159SB1                                | Baltimore/MD  | 11.21    | unnamed tributary to Stemmers Run             | Minor  | I                             | I   | 1                            | 4         |
| 166SB1                                | Baltimore/MD  | 11.3     | unnamed tributary to Brien Run                | Minor  | I                             | I   | NA                           | 4         |
| 166SB2a                               | Baltimore/MD  | 11.53    | Brien Run - 1                                 | Intermediate                                   | P                             | I   | 3                            | 12        |
| 166SB2b                               | Baltimore/MD  | 11.6     | Brien Run - 2                                 | Intermediate                                   | P                             | I   | 3                            | 12        |
| 181SB2                                | Baltimore/MD  | 12.87    | unnamed tributary to Brien Run - 2            | Minor  | P                             | I   | 2A or 2B                     | 8         |
| 194SA2                                | Baltimore/MD  | 13.35    | unnamed tributary to Whitemarsh Run - 1       | Minor  | I                             | IV  | 2A or 2B                     | 1         |
| 210SA2**                              | Baltimore/MD  | 14.2     | unnamed tributary to Whitemarsh Run - 1       | Minor  | P                             | IV  | NA                           | 5         |
| 211.1SA1                              | Baltimore/MD  | 14.38    | Whitemarsh Run                                | Intermediate                                   | P                             | IV  | 3                            | 80        |
| 214SA1                                | Baltimore/MD  | 14.8     | unnamed tributary to Whitemarsh Run - 1       | Intermediate                                   | P                             | IV  | NA                           | 24        |
| 215.1SA1                              | Baltimore/MD  | 14.9     | unnamed tributary to Whitemarsh Run - 1       | Intermediate                                   | P                             | IV  | 2A or 2B                     | 30        |
| 224SA1a                               | Baltimore/MD  | 15.09    | Whitemarsh Run-2                              | Intermediate                                   | P                             | IV  | 3                            | 25        |
| 227SA1                                | Baltimore/MD  | 15.5     | Whitemarsh Run-3                              | Intermediate                                   | P                             | IV  | 2A or 2B                     | 50        |
| 228SA1                                | Baltimore/MD  | 15.57    | unnamed tributary to Whitemarsh Run - 3       | Minor  | I                             | IV  | 1                            | 8         |
| 231SA1                                | Baltimore/MD  | 15.81    | unnamed tributary to Whitemarsh Run - 3       | Minor  | P                             | IV  | 2A or 2B                     | 4         |
| 249.1SA1                              | Baltimore/MD  | 16.48    | unnamed tributary to Whitemarsh Run - 3       | Minor  | I                             | IV  | 1                            | 6         |
| 249.1SA3                              | Baltimore/MD  | 16.69    | unnamed tributary to Whitemarsh Run - 3       | Minor  | P                             | IV  | 2A or 2B                     | 7         |
| 256SA2                                | Baltimore/MD  | 16.87    | unnamed tributary to Whitemarsh Run - 3       | Minor  | I                             | IV  | 1                            | 4         |
| 256SA1                                | Baltimore/MD  | 16.88    | unnamed tributary to Whitemarsh Run - 3       | Minor  | P                             | IV  | 2A or 2B                     | 4         |
| 262SA1a                               | Baltimore/MD  | 17.11    | unnamed tributary to Whitemarsh Run - 3       | Minor  | I                             | IV  | 1                            | 7         |
| 262SA1b                               | Baltimore/MD  | 17.14    | unnamed tributary to Whitemarsh Run - 3       | Minor  | I                             | IV  | 1                            | 7         |
| USGS Stream                           | Baltimore/MD  | 18.28    | Gunpowder Falls                               | Intermediate                                   | P                             | I   | 4                            | TBD       |
| 304SA3*                               | Baltimore/MD  | 19.18    | unnamed tributary to Gunpowder Falls          | Minor  | P                             | I   | 2A or 2B                     | 8         |
| 304SA1                                | Baltimore/MD  | 19.2     | unnamed tributary to Gunpowder Falls          | Intermediate                                   | P                             | I   | 2A or 2B                     | 12        |
| 324SA1                                | Baltimore/MD  | 20.64    | unnamed tributary to Gunpowder Falls          | Intermediate                                   | P                             | I   | 2A or 2B                     | 16        |
| 325.3SA1                              | Baltimore/MD  | 20.68    | unnamed tributary to Little Gunpowder Falls   | Minor  | P                             | III   | 2A or 2B                     | 6         |

| Stream Location Identification Number | County/State | Milepost | Waterbody                                   | Waterbody Crossing Classification <sup>a</sup> | USGS Stream Type <sup>b</sup> | State Water Quality Classification (Fisheries) <sup>c</sup> | Crossing Method <sup>d</sup> | Width(ft) |
|---------------------------------------|--------------|----------|---|--|-------------------------------|---|------------------------------|-----------|
| 340SA1                                | Baltimore/MD | 21.23    | unnamed tributary to Little Gunpowder Falls | Minor  | P                             | III   | 2A or 2B                     | 16        |
| 351SB1                                | Baltimore/MD | 22.22    | Little Gunpowder Falls                      | Intermediate                                   | P                             | III   | 3                            | 51        |
| 371SB1                                | Harford/MD   | 23.39    | Wildcat Branch                              | Minor  | P                             | III   | 2A or 2B                     | 8         |
| 373.4SA1                              | Harford/MD   | 23.89    | unnamed tributary to Wildcat Branch         | Minor  | P                             | III   | 2A or 2B                     | 4         |
| 382SA1                                | Harford/MD   | 24.96    | unnamed tributary to Elbow Brook            | Minor  | I                             | IV-P  | 1                            | 9         |
| 383SA4                                | Harford/MD   | 25.34    | unnamed tributary to Elbow Brook            | Minor  | P                             | IV-P  | 2A or 2B                     | 4         |
| 383SA3a                               | Harford/MD   | 25.36    | Elbow Brook - 1                             | Minor  | P                             | IV-P  | 2A or 2B                     | 11        |
| 383SA3b                               | Harford/MD   | 25.49    | Elbow Brook - 2                             | Minor  | P                             | IV-P  | 2A or 2B                     | 11        |
| 386.1SA1                              | Harford/MD   | 25.92    | unnamed tributary to Elbow Brook - 2        | Minor  | P                             | IV-P  | NA                           | 9         |
| not field verified                    | Harford/MD   | 27.01    | unnamed tributary to Winters Run            | Minor  | I                             | IV-P  | 2A or 2B                     | TBD       |
| USGS                                  | Harford/MD   | 27.47    | Winters Run                                 | Intermediate                                   | P                             | IV-P  | 3                            | TBD       |
| 430.4SA1a                             | Harford/MD   | 28.16    | Long Branch - 1                             | Intermediate                                   | P                             | IV-P  | 3                            | 24        |
| 430.4SA1b                             | Harford/MD   | 28.22    | Long Branch - 2                             | Intermediate                                   | I                             | IV-P  | 3                            | 5         |
| 431SA1                                | Harford/MD   | 28.35    | unnamed tributary to Long Branch - 2        | Minor  | P                             | IV-P  | 2A or 2B                     | 9         |
| 437.1SA1                              | Harford/MD   | 28.63    | unnamed tributary to Long Branch - 2        | Minor  | P                             | IV-P  | 2A or 2B                     | 6         |
| USGS Stream (LL443)                   | Harford/MD   | 29.28    | unnamed tributary to Long Branch - 2        | TBD  | P                             | IV-P  | 2A or 2B                     | TBD       |
| USGS Stream (LL447)                   | Harford/MD   | 29.73    | unnamed tributary to Long Branch - 2        | TBD  | P                             | IV-P  | 2A or 2B                     | TBD       |
| 455SA1                                | Harford/MD   | 30.61    | unnamed tributary to Stirrup Run            | Minor  | P                             | IV-P  | 2A or 2B                     | 5         |
| 458SA1                                | Harford/MD   | 30.71    | unnamed tributary to Stirrup Run            | Minor  | P                             | IV-P  | 2A or 2B                     | 5         |
| 462SA1                                | Harford/MD   | 30.8     | unnamed tributary to Stirrup Run            | Minor  | P                             | IV-P  | 2A or 2B                     | 6         |
| 455SA3*                               | Harford/MD   | 30.8     | unnamed tributary to Stirrup Run            | Minor  | I                             | IV-P  | 1                            | 5         |
| 455SA2                                | Harford/MD   | 30.84    | unnamed tributary to Stirrup Run            | Minor  | P                             | IV-P  | 2A or 2B                     | 5         |
| 464SA1                                | Harford/MD   | 31.06    | unnamed tributary to Stirrup Run            | Minor  | I                             | IV-P  | 1                            | 6         |
| 469.1SA3                              | Harford/MD   | 31.67    | Stirrup Run                                 | Minor  | P                             | IV-P  | 2A or 2B                     | 7         |
| 469.1SA2                              | Harford/MD   | 31.71    | unnamed tributary to Stirrup Run            | Minor  | P                             | IV-P  | 2A or 2B                     | 3         |
| 472SA2                                | Harford/MD   | 31.88    | unnamed tributary to Stirrup Run            | Minor  | P                             | IV-P  | 2A or 2B                     | 6         |
| 472SA1                                | Harford/MD   | 32.13    | unnamed tributary to Stirrup Run            | Minor  | I                             | IV-P  | 1                            | 6         |
| USGS Stream                           | Harford/MD   | 32.39    | unnamed tributary to Stirrup Run            | TBD  | P                             | IV-P  | 2A or 2B                     | TBD       |
| 484SA1**                              | Harford/MD   | 33.32    | unnamed tributary to Deer Creek             | Minor  | P                             | IV-P  | 2A or 2B                     | 8         |
| 484SA3                                | Harford/MD   | 33.36    | unnamed tributary to Deer Creek             | Minor  | I                             | IV-P  | 1                            | 5         |
| 486SA1                                | Harford/MD   | 33.8     | unnamed tributary to Deer Creek             | Minor  | P                             | IV-P  | 2A or 2B                     | 6         |
| 497SA1**                              | Harford/MD   | 34.41    | unnamed tributary to Deer Creek             | Minor  | I                             | IV-P  | NA                           | 3         |
| 497SA2                                | Harford/MD   | 34.48    | unnamed tributary to Deer Creek             | Minor  | I                             | IV-P  | 1                            | 6         |
| 498SA3                                | Harford/MD   | 34.88    | unnamed tributary to Deer Creek             | Minor  | I                             | IV-P  | 1                            | 3         |
| USGS Stream                           | Harford/MD   | 35.54    | Deer Creek                                  | Intermediate                                   | P                             | IV-P  | 2A or 2B                     | TBD       |
| 527SA1                                | Harford/MD   | 35.99    | unnamed tributary to Deer Creek             | Minor  | P                             | IV-P  | 2A or 2B                     | 5         |
| 527SA3                                | Harford/MD   | 36.07    | unnamed tributary to Deer Creek             | Minor  | I                             | IV-P  | 1                            | 5         |
| 533SA1                                | Harford/MD   | 36.42    | unnamed tributary to Deer Creek             | Minor  | I                             | IV-P  | 1                            | 8         |
| 538SA1                                | Harford/MD   | 36.55    | unnamed tributary to Deer Creek             | Minor  | I                             | IV-P  | 1                            | 8         |
| 527SA2**                              | Harford/MD   | 36.6     | unnamed tributary to Deer Creek             | Minor  | I                             | IV-P  | NA                           | 3         |
| 543SA1                                | Harford/MD   | 36.96    | unnamed tributary to Deer Creek             | Minor  | I                             | IV-P  | 1                            | 8         |
| USGS Stream                           | Harford/MD   | 37.76    | unnamed tributary to Deer Creek             | TBD  | P                             | IV-P  | 2A or 2B                     | TBD       |
| 566SA1                                | Harford/MD   | 37.78    | unnamed tributary to Deer Creek             | Minor  | I                             | IV-P  | 1                            | 10        |

| Stream Location Identification Number | County/State      | Milepost | Waterbody                            | Waterbody Crossing Classification <sup>a</sup> | USGS Stream Type <sup>b</sup> | State Water Quality Classification (Fisheries) <sup>c</sup> | Crossing Method <sup>d</sup> | Width(ft) |
|---------------------------------------|-------------------|----------|--------------------------------------|--|-------------------------------|---|------------------------------|-----------|
| 566SA4**                              | Harford/MD        | 38.12    | unnamed tributary to Deer Creek      | Minor  | I                             | IV-P  | NA                           | 1         |
| 566SA3                                | Harford/MD        | 38.13    | unnamed tributary to Deer Creek      | Minor  | I                             | IV-P  | 1                            | 4         |
| 566SA2                                | Harford/MD        | 38.22    | unnamed tributary to Deer Creek      | Minor  | I                             | IV-P  | 1                            | 6         |
| 568SA1                                | Harford/MD        | 38.26    | unnamed tributary to Deer Creek      | Minor  | I                             | IV-P  | 1                            | 8         |
| 568SA2**                              | Harford/MD        | 38.31    | unnamed tributary to Deer Creek      | Minor  | I                             | IV-P  | NA                           | 6         |
| 574SA3                                | Harford/MD        | 38.7     | unnamed tributary to Deer Creek      | Minor  | I                             | IV-P  | 1                            | 6         |
| 574SA2                                | Harford/MD        | 38.73    | unnamed tributary to Deer Creek      | Minor  | I                             | IV-P  | 1                            | 3         |
| 574SA1                                | Harford/MD        | 38.75    | unnamed tributary to Deer Creek      | Minor  | P                             | IV-P  | 2A or 2B                     | 6         |
| 576SA1                                | Harford/MD        | 39.06    | unnamed tributary to Deer Creek      | Minor  | P                             | IV-P  | 2A or 2B                     | 6         |
| 577SA1                                | Harford/MD        | 39.16    | unnamed tributary to Deer Creek      | Minor  | P                             | IV-P  | 2A or 2B                     | 6         |
| 587SA2                                | Harford/MD        | 39.78    | unnamed tributary to Deer Creek      | Minor  | I                             | IV-P  | 1                            | 4         |
| 619SA1                                | Harford/MD        | 41.79    | Peddler Run                          | Minor  | P                             | I-P   | 2A or 2B                     | 12        |
| 628SA1                                | Harford/MD        | 42.61    | Peddler Run                          | Intermediate                                   | P                             | I-P   | 2A or 2B                     | 13        |
| 645SA1                                | Harford/MD        | 43.25    | Peddler Run                          | Minor  | P                             | I-P   | 2A or 2B                     | 4         |
| 654SB1                                | Cecil/MD          | 43.63    | Peddler Run                          | Intermediate                                   | P                             | I-P   | 2A or 2B                     | 14        |
| 660 - SA1                             | Harford/Cecil/MD  | 44.23    | Susquehanna River                    | Major  | P                             | I-P   | NA                           | 3115.2    |
| 661SA3**                              | Harford/Cecil/MD  | 45.23    | unnamed tributary to Conowingo Creek | Minor  | I                             | I-P   | NA                           | 12        |
| 661SA4**                              | Harford/Cecil/MD  | 45.24    | unnamed tributary to Conowingo Creek | Minor  | I                             | I-P   | NA                           | 10        |
| 661SA2                                | Harford/Cecil/MD  | 45.27    | Conowingo Creek                      | Intermediate                                   | P                             | I-P   | 4                            | 30        |
| 664SA1                                | Cecil/MD          | 45.54    | unnamed tributary to Conowingo Creek | Intermediate                                   | P                             | I-P   | 3                            | 20        |
| 670SA1                                | Cecil/MD          | 46.17    | unnamed outflow for wetland 670WA1   | Minor  | I                             | I-P   | 1                            | 1         |
| 683.2SA1                              | Cecil/MD          | 47.15    | unnamed tributary to Conowingo Creek | Minor  | P                             | I-P   | 2A or 2B                     | 8         |
| 703SA1                                | Lancaster/PA      | 49.5     | unnamed tributary to Octoraro Creek  | Minor  | P                             | TSF   | 2A or 2B                     | 6         |
| 704SA1                                | Lancaster/PA      | 49.72    | unnamed tributary to Octoraro Creek  | Minor  | P                             | TSF   | 2A or 2B                     | 10        |
| 712SA1                                | Lancaster/PA      | 50.36    | unnamed tributary to Reynolds Run    | Minor  | P                             | HQ  | 2A or 2B                     | 8         |
| 716SA1a                               | Lancaster/PA      | 50.88    | unnamed tributary to Reynolds Run    | Intermediate                                   | P                             | HQ  | 3                            | 25        |
| 716SA1b                               | Lancaster/PA      | 50.89    | unnamed tributary to Reynolds Run    | Minor  | I                             | HQ  | 2A or 2B                     | 5         |
| 726SA1b                               | Lancaster/PA      | 50.89    | unnamed tributary to Reynolds Run    | Minor  | I                             | HQ  | NA                           | 5         |
| 726SA1a                               | Lancaster/PA      | 51.59    | Reynolds Run                         | Intermediate                                   | P                             | HQ  | NA                           | 20        |
| 725SA1                                | Lancaster/PA      | 51.6     | unnamed tributary to Reynolds Run    | Intermediate                                   | P                             | HQ  | 2A or 2B                     | 25        |
| 730.5SA1                              | Lancaster/PA      | 51.96    | Reynolds Run                         | Minor  | I                             | HQ  | 1                            | 6         |
| 765SA1                                | Lancaster/PA      | 53.32    | unnamed tributary to Octoraro Creek  | Minor  | I                             | TSF   | 1                            | 2         |
| 776SA1                                | Lancaster/PA      | 53.93    | unnamed tributary to Octoraro Creek  | Intermediate                                   | P                             | TSF   | 3                            | 12        |
| 779SA1                                | Lancaster/PA      | 54.57    | unnamed tributary to Octoraro Creek  | Minor  | P                             | TSF   | 2A or 2B                     | 2         |
| 785SA2                                | Lancaster/PA      | 54.77    | Reynolds Run                         | Minor  | P                             | HQ  | 2A or 2B                     | 6         |
| 785SA1                                | Lancaster/PA      | 54.82    | Reynolds Run                         | Intermediate                                   | P                             | HQ  | 2A or 2B                     | 20        |
| 787SA1                                | Lancaster/PA      | 55.47    | McCreary Run                         | Minor  | P                             | HQ  | 2A or 2B                     | 10        |
| 793SA1                                | Lancaster/PA      | 56.01    | unnamed tributary of Octoraro Creek  | Minor  | P                             | WWF   | 2A or 2B                     | 6         |
| 794SA1                                | Lancaster&Chester | 56.31    | Octoraro Creek                       | Intermediate                                   | P                             | WWF   | 4                            | 70        |
| 803SA1                                | Lancaster&Chester | 56.93    | Tweed Creek                          | Intermediate                                   | P                             | TSF   | 2A or 2B                     | 40        |
| 813SA1                                | Chester/PA        | 58.09    | Leech Run                            | Intermediate                                   | P                             | TSF   | 2A or 2B                     | 60        |
| 830SA1                                | Chester/PA        | 61.17    | unnamed tributary to Muddy Run       | Minor  | P                             | TSF   | 2A or 2B                     | 1         |
| 834SA2                                | Chester/PA        | 61.18    | unnamed tributary to Muddy Run       | Minor  | I                             | TSF   | 1                            | 1         |

| Stream Location Identification Number | County/State | Milepost | Waterbody                             | Waterbody Crossing Classification <sup>a</sup> | USGS Stream Type <sup>b</sup> | State Water Quality Classification (Fisheries) <sup>c</sup> | Crossing Method <sup>d</sup> | Width(ft) |
|---------------------------------------|--------------|----------|---------------------------------------|--|-------------------------------|---|------------------------------|-----------|
| 834SA1                                | Chester/PA   | 61.18    | unnamed tributary to Muddy Run        | Minor  | P                             | TSF   | 2A or 2B                     | 10        |
| 841SA1                                | Chester/PA   | 61.19    | unnamed tributary to Muddy Run        | Minor  | P                             | TSF   | 2A or 2B                     | 4         |
| 844SA4                                | Chester/PA   | 62.34    | unnamed tributary to Muddy Run        | Minor  | I                             | TSF   | NA                           | 4         |
| 844SA3                                | Chester/PA   | 62.44    | unnamed tributary to Muddy Run        | Minor  | P                             | TSF   | 2A or 2B                     | 10        |
| 851SA1                                | Chester/PA   | 62.92    | unnamed tributary to Rattlesnake Run. | Minor  | P                             | TSF   | 2A or 2B                     | 8         |
| 859SA2                                | Chester/PA   | 63.93    | unnamed tributary to East Elk Creek   | Minor  | P                             | TSF   | 2A or 2B                     | 2         |
| 859SA1                                | Chester/PA   | 64.04    | unnamed tributary to East Elk Creek   | Minor  | I                             | TSF   | 1                            | 3         |
| 864SA6                                | Chester/PA   | 64.16    | unnamed tributary to East Elk Creek   | Minor  | I                             | TSF   | NA                           | 4         |
| 864SA4                                | Chester/PA   | 64.17    | unnamed tributary to East Elk Creek   | Minor  | I                             | TSF   | NA                           | 3         |
| 864SA5                                | Chester/PA   | 64.24    | unnamed tributary to East Elk Creek   | Minor  | I                             | TSF   | 1                            | 2         |
| 864SA3                                | Chester/PA   | 64.25    | unnamed tributary to East Elk Creek   | Minor  | I                             | TSF   | 1                            | 3         |
| 864SA2                                | Chester/PA   | 64.27    | unnamed tributary to East Elk Creek   | Minor  | I                             | TSF   | 1                            | 10        |
| USGS Stream                           | Chester/PA   | 64.77    | unnamed tributary to East Elk Creek   | TBD  | I                             | TBD   | 2A or 2B                     | TBD       |
| 873SA1                                | Chester/PA   | 65.13    | unnamed tributary to East Elk Creek   | Minor  | I                             | TSF   | 1                            | 4         |
| 879SA1                                | Chester/PA   | 66.02    | unnamed tributary to Doe Run          | Minor  | I                             | TSF   | 1                            | 4         |
| 880SA2                                | Chester/PA   | 66.24    | unnamed tributary to Doe Run          | Minor  | P                             | TSF   | 2A or 2B                     | 4         |
| 880SA3                                | Chester/PA   | 66.25    | unnamed tributary to Doe Run          | Minor  | P                             | TSF   | 2A or 2B                     | 4         |
| 880SA1                                | Chester/PA   | 66.46    | unnamed tributary to Doe Run          | Minor  | I                             | TSF   | 1                            | 2         |
| 889SA1                                | Chester/PA   | 67.15    | unnamed tributary to Doe Run          | Minor  | P                             | TSF   | 2A or 2B                     | 6         |
| 893SA1                                | Chester/PA   | 67.48    | unnamed tributary to Doe Run          | Minor  | P                             | TSF   | 2A or 2B                     | 8         |
| 906SA1                                | Chester/PA   | 69.88    | unnamed tributary to Doe Run          | Minor  | P                             | TSF   | 2A or 2B                     | 6         |
| 908SA1                                | Chester/PA   | 69.92    | unnamed tributary to Doe Run          | Minor  | P                             | TSF   | 2A or 2B                     | 8         |
| 908SA3                                | Chester/PA   | 70.35    | unnamed tributary to Doe Run          | Minor  | I                             | TSF   | 1                            | 5         |
| USGS Stream                           | Chester/PA   | 70.52    | unnamed tributary to Buck Run         | TBD  | P                             | TSF   | 2A or 2B                     | TBD       |
| 917SA2                                | Chester/PA   | 71.38    | unnamed tributary to Buck Run         | Minor  | I                             | TSF   | TBD                          | 6         |
| 917SA3                                | Chester/PA   | 71.4     | unnamed tributary to Buck Run         | Minor  | I                             | TSF   | TBD                          | 6         |
| 921SA1                                | Chester/PA   | 72.14    | Buck Run                              | Intermediate                                   | P                             | TSF   | 3                            | 50        |
| 931SA2a                               | Chester/PA   | 73.61    | unnamed tributary to Doe Run          | Minor  | P                             | WWF   | 2A or 2B                     | 6         |
| 931SA2b                               | Chester/PA   | 73.62    | unnamed tributary to Doe Run          | Minor  | P                             | WWF   | 2A or 2B                     | 6         |
| 941SA1                                | Chester/PA   | 74.19    | West Branch Brandywine Creek          | Intermediate                                   | P                             | WWF   | 3                            | 70        |
| 944SA2                                | Chester/PA   | 74.38    | unnamed tributary to Brandywine Creek | Minor  | I                             | CWF   | 1                            | 3         |
| 949SA3                                | Chester/PA   | 75.14    | unnamed tributary to Brandywine Creek | Minor  | P                             | CWF   | 2A or 2B                     | 6         |
| 949SA2                                | Chester/PA   | 75.17    | unnamed tributary to Brandywine Creek | Minor  | P                             | CWF   | 2A or 2B                     | 7         |
| 971.1SA1                              | Chester/PA   | 75.57    | unnamed tributary to Broad Run        | Minor  | I                             | EV  | TBD                          | 2         |
| USGS Stream                           | Chester/PA   | 76.45    | unnamed tributary to Broad Run        | TBD  | I                             | EV  | TBD                          | TBD       |
| 983SA1                                | Chester/PA   | 76.54    | Broad Run                             | Minor  | I                             | EV  | 1                            | 6         |
| 995SA1**                              | Chester/PA   | 77.19    | unnamed tributary to Broad Run        | Minor  | P                             | EV  | NA                           | 12        |
| 1011.1SA1a                            | Chester/PA   | 77.27    | unnamed tributary to Broad Run        | Intermediate                                   | P                             | EV  | 3                            | 16        |
| 1011.1SA1b                            | Chester/PA   | 77.49    | unnamed tributary to Broad Run        | Minor  | P                             | EV  | 2A or 2B                     | 12        |
| 1054SA1                               | Chester/PA   | 78.14    | unnamed tributary to Beaver Creek     | Minor  | I                             | TSF   | 2A or 2B                     | 5         |
| USGS Stream                           | Chester/PA   | 79.35    | unnamed tributary to Beaver Creek     | TBD  | P                             | TSF   | 2A or 2B                     | TBD       |
| USGS Stream                           | Chester/PA   | 79.37    | Beaver Creek                          | Minor  | I                             | TSF   | 2A or 2B                     | TBD       |
| USGS Stream                           | Chester/PA   | 79.61    | Beaver Creek                          | Minor  | I                             | TSF   | 2A or 2B                     | TBD       |

| Stream Location Identification Number | County/State | Milepost | Waterbody   | Waterbody Crossing Classification <sup>a</sup> | USGS Stream Type <sup>b</sup> | State Water Quality Classification (Fisheries) <sup>c</sup> | Crossing Method <sup>d</sup> | Width(ft) |
|---------------------------------------|--------------|----------|---|--|-------------------------------|---|------------------------------|-----------|
| 1178SB1                               | Chester/PA   | 82.19    | unnamed tributary to East Branch Brandywine Creek | Minor  | P                             | WWF   | 2A or 2B                     | 6         |
| 1180SA1                               | Chester/PA   | 82.31    | East Branch Brandywine Creek                      | Intermediate                                   | P                             | WWF   | 3                            | 75        |
| 1187SA1*                              | Chester/PA   | 82.58    | Shamona   | Intermediate                                   | P                             | HQ  | NA                           | 35        |
| 1226SA1                               | Chester/PA   | 83.49    | unnamed tributary to Marsh Creek Lake             | Minor  | I                             | HQ  | 1                            | 4         |
| USGS Stream                           | Chester/PA   | 84.39    | unnamed tributary to Marsh Creek Lake             | TBD  | P                             | HQ  | 2A or 2B                     | TBD       |
| 1255SA1                               | Chester/PA   | 84.85    | unnamed tributary to Marsh Creek Lake             | Minor  | P                             | HQ  | 2A or 2B                     | 8         |
| 486SA2**                              | Harford/MD   | 33-34    | unnamed pond                                      | Minor  | P                             | Was IV-P  | NA                           | 75x100    |
| 490SA1**                              | Harford/MD   | 34-35    | unnamed pond                                      | Minor  | P                             | Was IV-P  | NA                           | 75x100    |

**NOTES:**

\*-only in temporary workspace

\*\*-adjacent to proposed ROW

TBD =To be determined

NE =Not Established

**References**

MD water quality (303(d)) data from Maryland's Draft 2006 List of Impaired Surface Waters [303(d) List] and Integrated Assessment of Water Quality in PA water quality (303(d)) data from the 2004 Pennsylvania Integrated Monitoring and Assessment Report Narrative. 2004. Available online at: MD water quality for fisheries data from Ray C. Dintaman, Jr. Director, Environmental Review Unit, Maryland Department of Natural Resources, letter to PA water quality for fisheries data mainly from the PA DEP's eMapPA (an interactive web-based map). Available online at: If necessary, additional data was collected from Pennsylvania Code, Title 25, Chapter 93. Water Quality Standards. Available online at:

**a. Waterbody Crossing Classification**

"Minor Waterbody" Includes waterbodies less than or equal to 10 feet wide at the water's edge at the time of crossing.

Intermediate Waterbody" Includes waterbodies greater than 10 feet wide but less than 100 feet wide at the water's edge at the time of crossing.

"Major Waterbody" Includes waterbodies greater than 100 feet wide at the water's edge at the time of crossing.

**b. Stream Type**

P = Perennial

I = Intermittent (includes ephemeral)

**c. State Water Quality Classification (Fisheries)**

**In Maryland:** I = Water Contact Recreation and Protection of Aquatic Life

I-P = Water Contact Recreation, Protection of Aquatic Life, and Public Water Supply

II = Shellfish Harvesting Waters

III = Natural Trout Waters

III-P = Natural Trout Waters and Public Water Supply

IV = Recreational Trout Waters

IV-P = Recreational Trout Waters and Public Water Supply

**In Pennsylvania:** WWF = Warm Water Fishes

TSF = Trout Stocking

CWF = Cold Water Fishes

| Stream Location Identification Number | County/State | Milepost | Waterbody | Waterbody Crossing Classification <sup>a</sup> | USGS Stream Type <sup>b</sup> | State Water Quality Classification (Fisheries) <sup>c</sup> | Crossing Method <sup>d</sup> | Width(ft) |
|---------------------------------------|--------------|----------|-----------|--|-------------------------------|---|------------------------------|-----------|
|---------------------------------------|--------------|----------|-----------|--|-------------------------------|---|------------------------------|-----------|

MF = Migratory Fishes  
 HQ = High Quality Waters  
 EV = Exceptional Value Waters

**d. Crossing Type**

- 1 = Intermittent minor waterbody - open cut (BMP 19)
- 2A = Dry flumed crossing (BMP 17)
- 2B = Dam & pump dry crossing (BMP18)
- 3 = Intermediate open cut (BMP 19) or coffer dam (BMP 18a)
- 4 = Site specific plan (Appendix 2B-2)
- NA Indicates not crossed by pipeline but may be proximate or in the construction workspace

Resource Report 3- Vegetation and Wildlife

Table 3.3.1-5

Location of Aboveground Facilities

AES Sparrows Point Project

| Facility                                    | County/State | Mile Post | Construction Requirements<br>(acres) <sup>1</sup> | New Land Requirements For Operation<br>(acres) | Existing Land Use(s)    |
|---|--------------|-----------|---|--|-------------------------|
| Interconnect and Mainline Valve at Terminal | Baltimore/MD | 0         | Included in area of LNG Terminal                  |  | Developed               |
| Mainline Valve 1                            | Baltimore/MD | 9.87      | 0.1   | 0.05   | Open Area/<br>Wooded    |
| Mainline Valve 2                            | Baltimore/MD | 19.78     | 0.1   | 0.05   | Open Area               |
| Mainline Valve 3                            | Harford/MD   | 29.43     | 0.1   | 0.05   | Open Area               |
| Mainline Valve 4                            | Harford/MD   | 39.35     | 0.1   | 0.05   | Open Area               |
| Mainline Valve 5                            | Lancaster/PA | 49.30     | 0.1   | 0.05   | Existing ROW/<br>Wooded |
| Mainline Valve 6                            | Chester/PA   | 59.23     | 0.1   | 0.05   | Open Area               |
| Mainline Valve 7                            | Chester/PA   | 69.27     | 0.1   | 0.05   | Existing ROW/<br>Wooded |
| Mainline Valve 8                            | Chester/PA   | 78.12     | 0.1   | 0.05   | Existing ROW/<br>Wooded |
| Interconnect - Transco                      | Chester/PA   | 81.00     | 0.5   | 0.25   | Existing ROW/<br>Wooded |
| Mainline Valve 9                            | Chester/PA   | 82.91     | 0.1   | 0.05   | Existing ROW/<br>Wooded |
| Interconnect - Tetco                        | Chester/PA   | 87.25     | 0.5   | 0.25   | Open Area               |
| Interconnect - Columbia                     | Chester/PA   | 87.57     | 0.5   | 0.25   | Open Area               |
| <b>Total acres</b>                          |              |           | 2.4   | 1.2  |                         |

Notes:

Construction requirements consist of the total of temporary workspace and the permanently maintained area associated with each proposed facility.

<sup>1</sup> The number of mainline valves is subject to change based on results of pipeline classification studies and final design.

Resource Report 3- Vegetation and Wildlife

Table 3.3.1-6

Location of Staging Areas

AES Sparrows Point Project

| Facility                             | County/<br>State | Mile<br>Post | Size<br>(acres) | Existing Land Use       |
|--------------------------------------|------------------|--------------|-----------------|-------------------------|
| <b>LNG Terminal Site</b>             |                  |              |                 |                         |
| Laydown Areas                        | Baltimore/MD     | 0            | 20              | Developed Areas a       |
| Recycling Facility                   | Baltimore/MD     | 0            | 15              | Developed Areas         |
| <b>Subtotal</b>                      |                  |              | 35              |                         |
| <b>Mid-Atlantic Express Pipeline</b> |                  |              |                 |                         |
| Contractor Yard                      | Baltimore/MD     | 0.90         | 46.95           | Developed Areas         |
| Pipe Yard/Rail Siding                | Baltimore/MD     | 3.75         | 15.65           | Developed Areas         |
| Laydown Area                         | Baltimore/MD     | 4.67         | 3.25            | Developed Areas         |
| Laydown Area                         | Baltimore/MD     | 5.11         | 1.56            | Developed Areas         |
| Laydown Area/<br>Contractor Yard     | Baltimore/MD     | 16.19        | 0.11            | Developed Areas         |
| Laydown Area                         | Baltimore/MD     | 16.22        | 2.55            | Developed Areas         |
| Contractor Yard/<br>Laydown Area     | Baltimore/MD     | 17.42        | 12.56           | Open Areas <sup>b</sup> |
| Laydown Area                         | Baltimore/MD     | 18.40        | 3.17            | Open Areas              |
| Contractor Yard/<br>Laydown Area     | Baltimore/MD     | 18.80        | 24.72           | Open Areas              |
| Laydown Area                         | Harford/MD       | 38.03        | 4.43            | Open Areas              |
| Laydown Area                         | Harford/MD       | 39.15        | 21.34           | Open Areas              |
| Contractor Yard/<br>Laydown Area     | Cecil/MD         | 44.63        | 2.67            | Open Areas              |
| Contractor Yard/<br>Laydown Area     | Cecil/MD         | 45.01        | 2.19            | Open Areas              |
| Laydown Area                         | Cecil/MD         | 47.52        | 30.03           | Open Areas              |
| Laydown Area                         | Cecil/MD         | 47.85        | 17.86           | Open Areas              |
|                                      | Lancaster/PA     | 51.05        | 2.19            | Open Areas              |
| Laydown Area                         | Chester/PA       | 66.52        | 2.07            | Developed               |
| Contractor Yard/<br>Laydown Area     | Chester/PA       | 74.78        | 23.60           | Open Areas              |
| Contractor Yard/<br>Laydown Area     | Chester/PA       | 79.93        | 36.20           | Open Areas              |
| Contractor Yard/<br>Laydown Area     | Chester/PA       | 81.93        | 6.70            | Open Areas              |
| Laydown Area                         | Chester/PA       | 83.56        | 8.30            | Open Areas              |
| Contractor Yard/<br>Laydown Area     | Chester/PA       | 85.05        | 10.17           | Open Areas              |
| Contractor Yard/<br>Laydown Area     | Chester/PA       | 85.08        | 3.50            | Open Areas              |
| Contractor Yard/<br>Laydown Area     | Chester/PA       | 87.06        | 6.50            | Open Areas              |
| Contractor Yard/<br>Laydown Area     | Chester/PA       | 87.57        | 26.71           | Open Areas              |
| <b>Subtotal</b>                      |                  |              | 315.0           |                         |
| <b>Total</b>                         |                  |              | 350             |                         |

a = Open areas consist of agricultural fields including hay fields and pasture and other undeveloped, un-forested areas defined as “open” in Resource Report 8.

b = Aquatic areas consist of wetland and waterbody distance and acreages measured between edges of buffers (indicated by reduced TWS width) on each side of the wetland or stream.

c = Developed areas consist of lands associated with roads, railroads, residential, and industrial/other land use categories as defined in Resource Report 8.

Resource Report 3- Vegetation and Wildlife

Table 3.3.2-1

Trawl Catch Abundance at the Sparrows Point LNG Terminal Site, June/October 2006 Sampling  
 AES Sparrows Point Project

| Common Name       | Scientific Name                | Total      | Percent of Total |
|-------------------|--------------------------------|------------|------------------|
| <b>June</b>       |                                |            |                  |
| White perch       | <i>Morone americana</i>        | 390        | 84               |
| Atlantic croaker  | <i>Micropogonias undulatus</i> | 42         | 9                |
| Spot              | <i>Leiostomus xanthurus</i>    | 19         | 4                |
| Striped bass      | <i>Morone saxatilis</i>        | 6          | 1                |
| Atlantic menhaden | <i>Brevoortia tyrannus</i>     | 3          | < 1              |
| Blue crab         | <i>Callinectes sapidus</i>     | 2          | < 1              |
| <b>Total:</b>     |                                | <b>462</b> | <b>100</b>       |
| <b>October</b>    |                                |            |                  |
| White perch       | <i>Morone americana</i>        | 158        | 44               |
| Spot              | <i>Leiostomus xanthurus</i>    | 114        | 32               |
| Bay Anchovy       | <i>Anchoa mitchilli</i>        | 32         | 9                |
| Blue crab         | <i>Callinectes sapidus</i>     | 30         | 8                |
| Weakfish          | <i>Cynoscion regalis</i>       | 8          | 2                |
| Summer Flounder   | <i>Paralichthys dentatus</i>   | 5          | 1                |
| Alewife           | <i>Alosa pseudoharengus</i>    | 3          | < 1              |
| Florida Pompano   | <i>Trachinotus carolinus</i>   | 3          | < 1              |
| Striped Bass      | <i>Morone saxatilis</i>        | 3          | < 1              |
| Bluefish          | <i>Pomatomus saltatrix</i>     | 2          | < 1              |
| Gizzard Shad      | <i>Dorosoma cepedianum</i>     | 1          | < 1              |
| <b>Total:</b>     |                                | <b>359</b> | <b>100</b>       |

Resource Report 3- Vegetation and Wildlife

Table 3.3.2-2

EFH-Designated Species and Life History Stages for the Sparrows Point LNG Terminal Site  
AES Sparrows Point Project

| Species  | Eggs     | Larvae   | Juveniles | Adults   |
|--|----------|----------|-----------|----------|
| <b>Fish Species</b>                                      | <b>E</b> | <b>L</b> | <b>J</b>  | <b>A</b> |
| Albacore tuna ( <i>Thunnus alalunga</i> )                |          |          | X         |          |
| Atlantic butterfish ( <i>Peprilus triacanthus</i> )      | X        | X        | X         | X        |
| Atlantic mackerel ( <i>Scomber scombrus</i> )            |          |          | X         | X        |
| Atlantic sea herring ( <i>Clupea harengus</i> )          |          |          | X         | X        |
| Black sea bass ( <i>Centropristus striata</i> )          |          | X        | X         | X        |
| Bluefin tuna ( <i>Thunnus thynnus</i> )                  |          |          | X         | X        |
| Bluefish ( <i>Pomatomus saltatrix</i> )                  | X        | X        | X         | X        |
| Cero ( <i>Scomberomorus regalis</i> )                    |          |          | X         | X        |
| Cobia ( <i>Rachycentron canadum</i> )                    | X        | X        | X         | X        |
| Dolphinfish ( <i>Coryphaena hippurus</i> )               | HAPC     | HAPC     | HAPC      | HAPC     |
| King mackerel ( <i>Scomberomorus cavalla</i> )           | X        | X        | X         | X        |
| Little tunny ( <i>Euthynnus alletteratus</i> )           |          |          | X         | X        |
| Monkfish ( <i>Lophius americanus</i> )                   | X        | X        | X         |          |
| Red drum ( <i>Sciaenops ocellatus</i> )                  | HAPC     | HAPC     | HAPC      | HAPC     |
| Red hake ( <i>Urophycis chuss</i> )                      | X        | X        | X         | X        |
| Scup ( <i>Stenotomus chrysops</i> )                      |          |          | X         | X        |
| Skipjack tuna ( <i>Katsuwonus pelamis</i> )              |          |          |           | X        |
| Snapper-grouper complex (73 species)*                    | HAPC     | HAPC     | HAPC      | HAPC     |
| Spanish mackerel ( <i>Scomberomorus maculatus</i> )      | X        | X        | X         | X        |
| Summer flounder ( <i>Paralichthys dentatus</i> )         | X        | X        | X         | X        |
| Swordfish ( <i>Xiphias gladius</i> )                     |          |          | X         |          |
| Whiting ( <i>Merluccius bilinearis</i> )                 |          |          | X         | X        |
| Windowpane ( <i>Scophthalmus aquosus</i> )               | X        | X        | X         | X        |
| Winter flounder ( <i>Pseudopleuronectes americanus</i> ) |          |          | X         | X        |
| Witch flounder ( <i>Glyptocephalus cynoglossus</i> )     | X        | X        |           |          |
| Yellowfin tuna ( <i>Thunnus albacares</i> )              |          |          | X         | X        |

Resource Report 3- Vegetation and Wildlife

Table 3.3.2-2

EFH-Designated Species and Life History Stages for the Sparrows Point LNG Terminal Site  
AES Sparrows Point Project

| Species  | Eggs     | Larvae   | Juveniles | Adults   |
|--|----------|----------|-----------|----------|
| Yellowtail flounder ( <i>Pleuronectes ferruginea</i> )         |          | X        |           |          |
| <b>Invertebrate Species</b>                                    | <b>E</b> | <b>L</b> | <b>J</b>  | <b>A</b> |
| Long finned squid ( <i>Loligo pealei</i> )                     |          |          | X         | X        |
| Ocean quahog ( <i>Artica islandica</i> )                       |          |          | X         | X        |
| Rock shrimp ( <i>Sicyonia brevirostris</i> )                   | X        | X        | X         | X        |
| Royal shrimp ( <i>Pleoticus robustus</i> )                     | X        | X        | X         | X        |
| Surf clam ( <i>Spisula solidissima</i> )                       |          |          | X         | X        |
| <b>Shark Species</b>   | <b>E</b> | <b>L</b> | <b>J</b>  | <b>A</b> |
| Atlantic sharpnose shark ( <i>Rhizoprionodon terraenovae</i> ) |          |          |           | X        |
| Blue shark ( <i>Prionace glauca</i> )                          |          |          |           | X        |
| Dusky shark ( <i>Carcharinus obscurus</i> )                    |          |          | X         |          |
| Sandbar shark ( <i>Carcharinus plumbeus</i> )                  |          |          | HAPC      | HAPC     |
| Sand tiger shark ( <i>Carcharius taurus</i> )                  |          |          | X         | X        |
| Scalloped hammerhead shark ( <i>Sphyrna lewini</i> )           |          |          | X         |          |
| Shortfin mako shark ( <i>Isurus oxyrinchus</i> )               |          |          | X         | X        |
| Spiny dogfish ( <i>Squalus acanthias</i> )                     |          |          | X         | X        |
| Tiger shark ( <i>Galeocerdo cuvieri</i> )                      |          |          | X         | X        |
| <b>Skate Species</b>   | <b>E</b> | <b>L</b> | <b>J</b>  | <b>A</b> |
| Clearnose skate ( <i>Raja eglanteria</i> )                     |          |          | X         | X        |
| Little skate ( <i>Leucoraja erinacea</i> )                     |          |          | X         | X        |
| Rosette Skate ( <i>Leucoraja garmani virginica</i> )           |          |          | X         |          |
| Winter skate ( <i>Leucoraja ocellata</i> )                     |          |          | X         | X        |

Notes:

1. HAPC - Habitat of Particular Concern

**Resource Report 3- Vegetation and Wildlife**

**Table 3.3.2-2**

**EFH-Designated Species and Life History Stages for the Sparrows Point LNG Terminal Site**

**AES Sparrows Point Project**

| <b>Species</b> | <b>Eggs</b> | <b>Larvae</b> | <b>Juveniles</b> | <b>Adults</b> |
|----------------|-------------|---------------|------------------|---------------|
|----------------|-------------|---------------|------------------|---------------|

2. Snapper-grouper complex is composed of 73 species and should only be considered if the proposed vessel routes intersect with a marine region located to the east of Cape Hatteras, NC, which is currently recognized as "The Point".

3. Table citations: USACE (2006), USDOC (1999a, 1999b), and SAMFC (1998).

Resource Report 3- Vegetation and Wildlife

Table 3.4-1

Vegetation Cover Types Affected by Construction and Operation of the Sparrows Point Project  
AES Sparrows Point Project

| Facility   | Vegetation Type              | Distance Traversed (feet) | Area Impacted by Construction (acres) <sup>a</sup> | Area Impacted by Operations (acres) <sup>b</sup> |
|--|------------------------------|---------------------------|--|--|
| LNG Terminal Site*                               | Wooded Areas                 | -                         | 0.0  | 0.0  |
|  | Open Areas <sup>c</sup>      | -                         | 20.0   | 0.0  |
|  | Aquatic Areas <sup>d</sup>   | -                         | 118.6  | 0.0  |
|  | Developed Areas <sup>e</sup> | -                         | 60.0   | 45.0   |
| <b>Total LNG Terminal Site</b>                   |                              | -                         | 198.6  | 45.0   |
| Mid-Atlantic Express Pipeline<br><i>Pipeline</i> | Wooded Areas                 | 114,364                   | 250.4  | 134.2  |
|  | Open Areas <sup>c</sup>      | 245,716                   | 569.5  | 288.3  |
|  | Aquatic Areas <sup>d</sup>   | 16,257                    | 28.6   | 19.1   |
|  | Developed Areas <sup>e</sup> | 87,345                    | 182.7  | 102.5  |
| subtotals  |                              | 463,682                   | 1031.3   | 544.0  |
| Yards and Storage Areas                          | Wooded Areas                 | -                         | 0.0  | 0.0  |
|  | Open Areas <sup>c</sup>      | -                         | 242.8  | 0.0  |
|  | Aquatic Areas <sup>d</sup>   | -                         | 0.0  | 0.0  |
|  | Developed Areas <sup>e</sup> | -                         | 107.1  | 0.0  |
| subtotals  |                              | -                         | 350.0  | 0.0  |
| Access Roads                                     | Wooded Areas                 | 5,350                     | 3.1  | 0.0  |
|  | Open Areas <sup>c</sup>      | 32,315                    | 17.3   | 1.3  |
|  | Aquatic Areas <sup>d</sup>   | 0                         | 0.0  | 0.0  |
|  | Developed Areas <sup>e</sup> | 34,485                    | 19.6   | 0.1  |
| subtotals  |                              | 72,150                    | 40.0   | 1.4  |
| Aboveground Facilities<br>(MLVs & Interconnects) | Wooded Areas                 | -                         | 0.9  | 0.5  |
|  | Open Areas <sup>c</sup>      | -                         | 1.5  | 0.8  |
|  | Aquatic Areas <sup>d</sup>   | -                         | -  | -  |
|  | Developed Areas <sup>e</sup> | -                         | -  | -  |
| subtotals  |                              | -                         | 2.4  | 1.2  |
| <b>Total Pipeline Associated Facilities</b>      |                              | 535,832                   | 1423.6   | 546.6  |
| <b>Project Total</b>                             |                              | <b>535,832</b>            | <b>1622.2</b>                                      | <b>591.6</b>                                     |

Notes

- a Consists of entire construction workspace for pipeline facilities, LNG terminal and the permanent easement. Acreages were calculated using polygon analysis and therefore totals may not always equate to a straight length times width calculation.
- b Consists of only the 50-foot-wide new permanent maintained easement for the proposed pipeline facilities. Acreages were calculated using polygon analysis and therefore totals may not always equate to a straight length times width calculation.
- c Open areas consist of agricultural fields including hay fields and pasture and other undeveloped, un-forested areas defined as "open" in Resource Report 8.
- d Aquatic areas consist of wetland and waterbody distance and acreages measured between edges of buffers (indicated by reduced TWS width) on each side of the wetland or stream.
- e Developed areas consist of lands associated with roads, railroads, residential, and industrial/other land use categories as defined in Resource Report 8.
- \* Aquatic and developed areas within the LNG Terminal facility contain essentially no natural vegetation

Resource Report 3- Vegetation and Wildlife

Table 3.5-1

Significant Wildlife Habitats Potentially Affected by the Sparrows Point Project  
AES Sparrows Point Project

| Facility                      | Location (Milepost)                   | Description   | Distance Traversed (feet) | Distance Traversed (acres) | Construction ROW Width (feet) |
|-------------------------------|---------------------------------------|---|---------------------------|----------------------------|-------------------------------|
| LNG Terminal Site             | N/A                                   | Sparrows Point Waterbird Colony (~1.5 miles south of Site)          | 0                         | N/A                        | N/A                           |
|                               | N/A                                   | Fort Carroll Island Waterbird Colony (~1.5 miles southwest of Site) | 0                         | N/A                        | N/A                           |
|                               | N/A                                   | Waterfowl Concentration Area (Undefined Location)                   | 0                         | N/A                        | N/A                           |
| Mid-Atlantic Express Pipeline | 0.00                                  | MD Designated Critical Area   | 1,426                     | 3.1                        | 75                            |
|                               | 0.44                                  | MD Designated Critical Area   | 1,320                     | 3.1                        | 75                            |
|                               | 0.69                                  | MD Designated Critical Area   | 1,795                     | 0.8                        | 75                            |
|                               | 4.08                                  | MD Designated Critical Area   | 1,584                     | 0.8                        | 75                            |
|                               | 5.93                                  | MD Designated Critical Area   | 264                       | 2.5                        | 75                            |
|                               | 6.66                                  | MD Designated Critical Area   | 2,006                     | 2.5                        | 75                            |
|                               | 8.22                                  | MD Designated Critical Area   | 2,323                     | 5.0                        | 75                            |
|                               | 8.73                                  | MD Designated Critical Area   | 1,531                     | 5.0                        | 75                            |
|                               | 10.24                                 | MD Designated Critical Area   | 684                       | 0.3                        | 75                            |
|                               | 11.06                                 | MD Designated Critical Area   | 634                       | 1.8                        | 75                            |
|                               | 11.26                                 | MD Designated Critical Area   | 105                       | 2.0                        | 75                            |
|                               | 14.15                                 | Forest Interior Dwelling Bird Habitat                               | 4                         | N/A                        | 75                            |
|                               | 14.29                                 | Forest Interior Dwelling Bird Habitat                               | 133                       | N/A                        | 75                            |
|                               | 14.45                                 | Forest Interior Dwelling Bird Habitat                               | 606                       | N/A                        | 75                            |
|                               | 14.57                                 | Forest Interior Dwelling Bird Habitat                               | 1,153                     | N/A                        | 75                            |
|                               | 14.83                                 | Forest Interior Dwelling Bird Habitat                               | 191                       | N/A                        | 75                            |
|                               | 14.88                                 | Forest Interior Dwelling Bird Habitat                               | 471                       | N/A                        | 75                            |
|                               | 15.02                                 | Forest Interior Dwelling Bird Habitat                               | 2,269                     | N/A                        | 75                            |
|                               | 15.45                                 | Forest Interior Dwelling Bird Habitat                               | 564                       | N/A                        | 75                            |
|                               | 15.71                                 | MD Designated Critical Area   | 2,323                     | 2.6                        | 75                            |
|                               | 18.22                                 | Forest Interior Dwelling Bird Habitat                               | 121                       | N/A                        | 75                            |
|                               | 19.16                                 | Forest Interior Dwelling Bird Habitat                               | 604                       | N/A                        | 75                            |
|                               | 19.29                                 | Forest Interior Dwelling Bird Habitat                               | 539                       | N/A                        | 75                            |
|                               | 19.39                                 | Forest Interior Dwelling Bird Habitat                               | 1,303                     | N/A                        | 75                            |
|                               | 22.01                                 | Forest Interior Dwelling Bird Habitat                               | 4,270                     | N/A                        | 75                            |
|                               | 22.24                                 | Nontidal Wetland of Special State Concern                           | 280                       | 0.5                        | 75                            |
|                               | 27.04                                 | Forest Interior Dwelling Bird Habitat                               | 1,536                     | N/A                        | 75                            |
|                               | 27.38                                 | Forest Interior Dwelling Bird Habitat                               | 1,472                     | N/A                        | 75                            |
|                               | 27.67                                 | Forest Interior Dwelling Bird Habitat                               | 907                       | N/A                        | 75                            |
|                               | 28.02                                 | Forest Interior Dwelling Bird Habitat                               | 2                         | N/A                        | 75                            |
|                               | 31.65                                 | Forest Interior Dwelling Bird Habitat                               | 235                       | N/A                        | 75                            |
|                               | 35.31                                 | Forest Interior Dwelling Bird Habitat                               | 957                       | N/A                        | 75                            |
|                               | 35.56                                 | Forest Interior Dwelling Bird Habitat                               | 302                       | N/A                        | 75                            |
|                               | 35.94                                 | Forest Interior Dwelling Bird Habitat                               | 40                        | N/A                        | 75                            |
| 37.72                         | Forest Interior Dwelling Bird Habitat | 1,422   | N/A                       | 75                         |                               |
| 38.10                         | Forest Interior Dwelling Bird Habitat | 1,320   | N/A                       | 75                         |                               |
| 38.40                         | Forest Interior Dwelling Bird Habitat | 371   | N/A                       | 75                         |                               |
| 38.65                         | Forest Interior Dwelling Bird Habitat | 432   | N/A                       | 75                         |                               |
| 40.97                         | Forest Interior Dwelling Bird Habitat | 124   | N/A                       | 75                         |                               |

| Facility                      | Location (Milepost) | Description                           | Distance Traversed (feet) | Distance Traversed (acres) | Construction ROW Width (feet) |
|-------------------------------|---------------------|---------------------------------------|---------------------------|----------------------------|-------------------------------|
|                               | 41.02               | Forest Interior Dwelling Bird Habitat | 300                       | N/A                        | 75                            |
|                               | 41.55               | Forest Interior Dwelling Bird Habitat | 3,868                     | N/A                        | 75                            |
|                               | 42.59               | Forest Interior Dwelling Bird Habitat | 968                       | N/A                        | 75                            |
|                               | 43.76               | Forest Interior Dwelling Bird Habitat | 715                       | N/A                        | 75                            |
|                               | 44.55               | Forest Interior Dwelling Bird Habitat | 3,501                     | N/A                        | 75                            |
|                               | 45.25               | Forest Interior Dwelling Bird Habitat | 2,143                     | N/A                        | 75                            |
|                               | 45.87               | Forest Interior Dwelling Bird Habitat | 288                       | N/A                        | 75                            |
|                               | 46.20               | Forest Interior Dwelling Bird Habitat | 10                        | N/A                        | 75                            |
|                               | 46.31               | Forest Interior Dwelling Bird Habitat | 235                       | N/A                        | 75                            |
|                               | 46.48               | Forest Interior Dwelling Bird Habitat | 237                       | N/A                        | 75                            |
|                               | 46.57               | Forest Interior Dwelling Bird Habitat | 534                       | N/A                        | 75                            |
|                               | 46.68               | Forest Interior Dwelling Bird Habitat | 213                       | N/A                        | 75                            |
|                               | 47.09               | Forest Interior Dwelling Bird Habitat | 2,085                     | N/A                        | 75                            |
|                               | 49.85               | Forest Interior Dwelling Bird Habitat | 515                       | N/A                        | 75                            |
| <b>Access Roads</b>           |                     |                                       |                           |                            |                               |
|                               | 1.00                | MD Designated Critical Area           | 909                       | 0.5                        | 25                            |
|                               | 4.78                | MD Designated Critical Area           | 1,120                     | 0.6                        | 25                            |
|                               | 5.12                | MD Designated Critical Area           | 315                       | 0.2                        | 25                            |
|                               | 8.24                | MD Designated Critical Area           | 413                       | 0.2                        | 25                            |
|                               | 8.53                | MD Designated Critical Area           | 2,140                     | 1.2                        | 25                            |
|                               | 14.90               | Forest Interior Dwelling Bird Habitat | 94                        | 0.1                        | 25                            |
|                               | 16.00               | MD Designated Critical Area           | 63                        | 0.0                        | 25                            |
|                               | 37.90               | Forest Interior Dwelling Bird Habitat | 150                       | N/A                        | 25                            |
|                               | 42.70               | Forest Interior Dwelling Bird Habitat | 373                       | N/A                        | 25                            |
|                               | 45.00               | Forest Interior Dwelling Bird Habitat | 1,932                     | N/A                        | 25                            |
|                               | 45.00               | Forest Interior Dwelling Bird Habitat | 1,711                     | N/A                        | 25                            |
|                               | 45.40               | Forest Interior Dwelling Bird Habitat | 319                       | N/A                        | 25                            |
|                               | 47.30               | Forest Interior Dwelling Bird Habitat | 422                       | N/A                        | 25                            |
|                               | 47.30               | Forest Interior Dwelling Bird Habitat | 119                       | N/A                        | 25                            |
|                               | 50.17               | Forest Interior Dwelling Bird Habitat | 1,333                     | N/A                        | 25                            |
| <b>Pipe Yards</b>             |                     |                                       |                           |                            |                               |
|                               | 1.00                | MD Designated Critical Area           | N/A                       | 40.2                       | 75                            |
|                               | 3.93                | MD Designated Critical Area           | N/A                       | 11.3                       | 75                            |
|                               | 4.68                | MD Designated Critical Area           | N/A                       | 3.0                        | 75                            |
|                               | 38.00               | Forest Interior Dwelling Bird Habitat | N/A                       | 0.2                        | 75                            |
|                               | 45.00               | Forest Interior Dwelling Bird Habitat | N/A                       | 2.0                        | 75                            |
| <b>Aboveground Facilities</b> |                     |                                       |                           |                            |                               |
|                               |                     | No Known Significant Habitats         |                           |                            |                               |
|                               |                     |                                       |                           |                            |                               |
|                               |                     |                                       |                           |                            |                               |

N/A: Where pipeline crosses Forest Interior Dwelling Bird Habitat, no new corridor is proposed, thus no acreage impacts are anticipated.

Resource Report 3- Vegetation and Wildlife

Table 3.6-1

Endangered and Threatened Species Potentially Affected by the Sparrows Point Project  
AES Sparrows Point Project

| Facility                   | Species   | Status <sup>a</sup> |    |         |          | General Habitat Requirements                                      | Field Survey Requirements <sup>b</sup> |
|----------------------------|---|---------------------|----|---------|----------|---|--|
|                            |   | Federal             | MD | PA      |          |   |  |
|                            |   |                     |    | Current | Proposed |   |  |
| LNG Terminal Site          |   |                     |    |         |          |   |  |
|                            | <b>Fish</b>                                       |                     |    |         |          |   |  |
|                            | Shortnose Sturgeon                                |                     |    |         |          |   |  |
|                            | <i>Acipenser brevirostrum</i>                     | FE                  | SE | SE      | SE       | Estuaries; Chesapeake Bay   | No Survey Needed                       |
|                            | Atlantic Sturgeon                                 |                     |    |         |          |   |  |
|                            | <i>Acipenser oxyrinchus</i>                       | FC                  | NL | SE      | SE       | Large rivers, estuaries, Chesapeake Bay, open ocean               | No Survey Needed                       |
|                            | Logperch  |                     |    |         |          |   |  |
|                            | <i>Percina caprodes</i>                           | NL                  | ST | NL      | NL       | Small rivers, streams, and lakes. Prefers clean riffles and runs. | TBD                                    |
|                            | <b>Amphibians/Reptiles</b>                        |                     |    |         |          |   |  |
|                            | Loggerhead Sea Turtle                             |                     |    |         |          |   |  |
|                            | <i>Caretta caretta</i>                            | FT                  | ST | NP      | NP       | Estuaries; Chesapeake Bay   | No Survey Needed                       |
|                            | Kemp's Ridley Sea Turtle                          |                     |    |         |          |   |  |
|                            | <i>Lepidochelys kempi</i>                         | FE                  | SE | NP      | NP       | Estuaries; Chesapeake Bay   | No Survey Needed                       |
|                            | Green Sea Turtle                                  |                     |    |         |          |   |  |
|                            | <i>Chelonia mydas</i>                             | FT                  | ST | NP      | NP       | Estuaries; Chesapeake Bay   | No Survey Needed                       |
|                            | Leatherback Sea Turtle                            |                     |    |         |          |   |  |
|                            | <i>Dermochelys coricea</i>                        | FE                  | SE | NP      | NP       | Pelagic; Chesapeake Bay   | No Survey Needed                       |
|                            | <b>Birds</b>                                      |                     |    |         |          |   |  |
|                            | Least Tern  |                     |    |         |          |   |  |
|                            | <i>Sterna antillarum</i>                          | NL                  | ST | NL      | NL       | beaches, sandbars, flat open sand areas, and main land            | No Survey Needed                       |
|                            | <b>Mammals</b>                                    |                     |    |         |          |   |  |
|                            | North Atlantic Right Whale                        |                     |    |         |          |   |  |
|                            | <i>Eubalaena glacialis</i>                        | FE                  | SE | NP      | NP       | Pelagic   | No Survey Needed                       |
|                            | Humpback Whale                                    |                     |    |         |          |   |  |
|                            | <i>Megaptera novaeangliae</i>                     | FE                  | SE | NP      | NP       | Pelagic   | No Survey Needed                       |
|                            | Fin Whale   |                     |    |         |          |   |  |
|                            | <i>Balaenoptera physalus</i>                      | FE                  | SE | NP      | NP       | Pelagic   | No Survey Needed                       |
|                            | Sperm Whale                                       |                     |    |         |          |   |  |
|                            | <i>Physeter macrocephalus</i>                     | FE                  | SE | NP      | NP       | Pelagic   | No Survey Needed                       |
| Total Mid-Atlantic Express |   |                     |    |         |          |   |  |
|                            | <b>Birds</b>                                      |                     |    |         |          |   |  |
|                            | Bald Eagle  |                     |    |         |          |   |  |
|                            | <i>Haliaeetus leucocephalus</i>                   | FT                  | ST | ST      | ST       | Coasts, rivers, large lakes in open areas                         | TBD (Monitoring)                       |
|                            | <b>Amphibians/Reptiles</b>                        |                     |    |         |          |   |  |
|                            | Bog Turtle  |                     |    |         |          |   |  |
|                            | <i>Clemmys mühlenbergii</i>                       | FT                  | ST | SE      | SE       | Fens, bogs, and other wetlands                                    | Apr 15 - Jun 15 2007                   |
|                            | <b>Plants</b>                                     |                     |    |         |          |   |  |
|                            | Serpentine Aster                                  |                     |    |         |          |   |  |
|                            | <i>Aster depauperatus</i>                         | NL                  | SE | NL      | NL       | Serpentine barren endemic.  | TBD (Aug - Oct)                        |
|                            | Broad-glumed Brome                                |                     |    |         |          |   |  |
|                            | <i>Bromus latiglumis</i>                          | NL                  | SE | NL      | NL       | Wet woods and prairies, alluvial soil along streams.              | TBD (Jun - Jul)                        |
|                            | Hitchcock's Sedge                                 |                     |    |         |          |   |  |
|                            | <i>Carex hitchcockiana</i>                        | NL                  | SE | NL      | NL       | Calcareous or rich woods; rich, moist woods.                      | TBD (May)                              |
| Total Mid-Atlantic Express |   |                     |    |         |          |   |  |
|                            | Porcupine Sedge                                   |                     |    |         |          |   |  |
|                            | <i>Carex hystericina</i>                          | NL                  | SE | NL      | NL       | Swamps and low meadows  | TBD (June)                             |
|                            | Tufted Hairgrass                                  |                     |    |         |          |   |  |
|                            | <i>Deschampsia cespitosa</i>                      | NL                  | SE | NL      | NL       | Bogs, fens, wet grassy meadows.                                   | TBD (July)                             |
|                            | Ellisia   |                     |    |         |          |   |  |
|                            | <i>Ellisia nyctelea</i>                           | NL                  | NL | ST      | ST       | Damp shady banks and rich alluvial woods.                         | May 2007                               |
|                            | Soapwort Gentian                                  |                     |    |         |          |   |  |
|                            | <i>Gentiana saponaria</i>                         | NL                  | NL | NL      | SE       | Moist open woods, roadsides, and swamps.                          | Sept - Oct 2007                        |
|                            | Hoary Frostweed                                   |                     |    |         |          |   |  |
|                            | <i>Helianthemum bicknellii</i>                    | NL                  | SE | SE      | SE       | Dry prairies, woods; in sandy soil                                | TBD (May - Jul)                        |
|                            | Slender Blue Flag                                 |                     |    |         |          |   |  |
|                            | <i>Iris prismatica</i>                            | NL                  | SE | SE      | SE       | Bogs and marshes, shores, swamps, moist meadows.                  | TBD (Jun 1 - Jul 15)                   |
|                            | Umbrella Magnolia                                 |                     |    |         |          |   |  |
|                            | <i>Magnolia tripetala</i>                         | NL                  | NL | ST      | NL       | Rich wooded slopes and floodplains                                | May 2007                               |
|                            | Stiff Cowbane                                     |                     |    |         |          |   |  |
|                            | <i>Oxypolis rigidior</i>                          | NL                  | NL | NL      | ST       | Swamps, bogs, sedge meadows, sandy shores, and railroad beds.     | Aug - Sept 2007                        |
|                            | Forked Chickweed                                  |                     |    |         |          |   |  |
|                            | <i>Paronychia fastigiata</i> var. <i>nutallii</i> | NL                  | NL | NL      | SE       | Open woods and edges in dry, rocky, or shady soils.               | Jul - Sept 2007                        |
|                            | Clammyweed  |                     |    |         |          |   |  |
|                            | <i>Polanisia dodecandra</i>                       | NL                  | SE | NL      | NL       | Dry, sandy or gravelly soil, especially along streams.            | TBD (May - Oct)                        |
|                            | Seneca Snakeroot                                  |                     |    |         |          |   |  |
|                            | <i>Polygala senega</i>                            | NL                  | ST | NL      | NL       | Dry, rocky or gravelly soils; forested and non-forested habitats. | TBD (May - Jul)                        |
|                            | Leonard's Skullcap                                |                     |    |         |          |   |  |
|                            | <i>Scutellaria leonardii</i>                      | NL                  | ST | NL      | NL       | Dry rocky soil, low woods and fields, usually on basic soil.      | TBD (May - Jul)                        |

Resource Report 3- Vegetation and Wildlife

Table 3.6-1

Endangered and Threatened Species Potentially Affected by the Sparrows Point Project  
AES Sparrows Point Project

| Facility               | Species                       | Status <sup>a</sup> |    |         |          | General Habitat Requirements                                   | Field Survey Requirements <sup>b</sup> |  |
|------------------------|-------------------------------|---------------------|----|---------|----------|--|--|--|
|                        |                               | Federal             | MD | PA      |          |  |  |  |
|                        |                               |                     |    | Current | Proposed |  |  |  |
| Aboveground Facilities | Northern Dropseed             |                     |    |         |          | Pine barrens over olivine, limestone or serpentine grasslands. | TBD (Aug - Sept)                       |  |
|                        | <i>Sporobolus heterolepis</i> | NL                  | SE | SE      | SE       |  |  |  |
|                        | Featherbells                  |                     |    |         |          | Thin woodlands, emergent wetlands, open sphagnous swales.      | TBD (Jul 1 - Aug 15)                   |  |
|                        | <i>Stenanthium gramineum</i>  | NL                  | ST | NL      | NL       |  |  |  |
|                        | Pencilflower                  |                     |    |         |          | Sandy fields, riverbanks, and dry rocky or shaly slopes.       | Jul - Sept 2007                        |  |
|                        | <i>Stylosanthes biflora</i>   | NL                  | NL | NL      | SE       |  |  |  |
|                        | Fameflower                    |                     |    |         |          |  |  |  |
|                        | <i>Talinum teretifolium</i>   | NL                  | SE | NL      | NL       | Dry serpentine barrens, rock outcrops.                         | TBD (May - Jun)                        |  |
|                        | <b>Invertebrates</b>          |                     |    |         |          |  |  |  |
|                        |                               | Regal Fritillary    |    |         |          |  |  |  |
|                        | <i>Speyeria idalia</i>        | NL                  | SE | NL      | NL       | Grassland habitats.  | TBD (Jun - Aug)                        |  |
| Aboveground Facilities |                               |                     |    |         |          |  |  |  |
|                        | No Known Species              |                     |    |         |          |  |  |  |

| <sup>a</sup> Status                 |
|-------------------------------------|
| NL = Not listed                     |
| NP = Not present in the state       |
| FE = Federally listed as endangered |
| FT = Federally listed as threatened |
| FC = Federal species of concern     |
| SE = State-listed as endangered     |
| ST = State-listed as threatened     |

| <sup>b</sup> Field Survey Requirements  |
|---|
| TBD = To be determined during Agency consultation if survey is needed. The appropriate survey period is in parentheses. |